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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| 09/400,865 | 09/21/99 | CANINI | F 3572-6 |

MM91/1004

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| EXAMINER | |
|---|---|
| NGUYEN,S | |
| ART UNIT | PAPER NUMBER |
| 2877 | |

DATE MAILED: 10/04/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

| Office Action Summary | Application No. 09/400,865 | Applicant(s) CANINI ET AL. | |
|---|---|---|---|
| | Examiner Sang Nguyen | Art Unit 2877 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *21 September 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 September 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> > (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

8. Claims 1-2, 18, and 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Plesko (U.S.Patent No. 6,233,098).

Regarding claims 1 and 23-24; Plesko discloses the claimed invention as an optical device and a method for aiming along an axis Z (figure 21) and visually indicating a reading zone of a barcode target (figure 17), the optical device comprising:

* at least one illuminating assembly (figures and 7) active on the reading zone portion of the barcode target along an optical emission path (16a,16b,17a,17b,18a,18b of figures 3 and 7), wherein the at least one illuminating assembly having a light source (1 or S of figure 7), a diaphragm (figures 3 and 7) is considered as a transparent window (14 of figures 7 and 8a-8d) and an aperture (15 of figure 7 or 120 of figure 8a) including a preset shape (figure 8) for selecting a portion of the light generated by the light source (1 of figure 7), and a converging lens (2 of figure 7) placed downstream of the diaphragm (14,15) for collimating the shaped light

coming from the diaphragm and projecting the light onto the reading zone portion of barcode target. See figures 1-24a and 24b.

Regarding claim 2, Plesko discloses the converging lens (2) is positioned at a distance away from the diaphragm (14) such that the shape light coming from the diaphragm (14) is focused onto the reading zone portion of the barcode target. See figures 3 and 7.

Regarding claim 18; figures 16 and 17 of Plesko discloses a tubular element associated with a holding plate for light source and isolate the light emitted by the light source and hold the diaphragm and converging lens.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 3-17, 19-22, 25-27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plesko (U.S.Patent No. 6,233,098) in view of Massieu et al (U.S.Patent No. 5,397,885).

Regarding claims 3 and 4; figures 1 and 2 of Massieu et al discloses at least two first illuminating assemblies (figures 1) and at least two second illuminating assemblies (figure 1) disposed symmetrically relative to the aiming axis. It would have been obvious to one having

ordinary skill in the art at the time the invention was made to include in Plesko at least two first illuminating assemblies and at least two second illuminating assemblies disposed symmetrically relative to the aiming axis as taught by Massieu et al for the purpose of reading different bar codes having different widths of bar codes.

Regarding claim 5; Massieu et al discloses the light source or illumination strip (15 of figure 2) an inclined optical beam with respect to a first reference plan and a second reference plane lying perpendicular and intersecting each other along the aiming axis (col.5 lines 1-20). It would have been to one of ordinary skill in the art at the time the invention was made to include Plesko's the optical device as taught by Massieu et al for the purpose of reading different bar codes having different widths of bar codes on the different plane.

Regarding claims 6-8, 10, and 12; it is inherent in Massieu et al and Plesko's the optical device that wherein the optical paths of the first illuminating assemblies and the second illuminating assemblies are set, relative to the axis Z, at an angle of $+\phi v/2$ and $-\phi v/2$, respectively, on the first reference plane XZ and at an angle $+\phi h/2$ and $-\phi h/2$, respectively, on the second refence plane YZ.

Regarding claims 9, 11, 13-17, and 30; Massieu et al discloses at least one optical deflection prism or a pair of optical deflection prism (18,19 of figure 2) disposed on the optical emission path (figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in Plesko at least one optical deflection prism or a pair of

optical deflection prism as taught by Massieu et al for the purpose of reducing light noise beam from light source.

Regarding claim 19, figures 3 and 7 of Plesko discloses the illuminating assembly comprises a V-like light guide disposed between the light source and the converging lens on the emission path.

Regarding claims 20-22 and 25-27; Massieu et al discloses a means for determining a distance and orientation (12a and 12b of figure 2) of the reading zone of barcode (12 of figure 2) having a lens (13 of figure 2) for picking up the light diffused form the reading zone (12), means for sensing (14 of figure 2) the image of the light diffused from the reading zone (12) and image lens (13), means for processing the image by the sensing means (14) for calculating the distance and orientation of the reading zone of barcode (col.6 lines 25-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include in Plesko's the optical device as taught by Massieu et al for the purpose of measuring or calculating the distance and orientation with different from the bar codes and low cost system.

11. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plesko (U.S.Patent No. 6,233,098) in view of Massieu et al (U.S.Patent No.5,397,885).

Regarding claim 28; Plesko discloses the claimed invention as an optical device and a method for aiming along an axis Z (figure 21) and visually indicating a reading zone of a barcode target (figure 17), the optical device comprising:

* at least one illuminating assembly (figures and 7) active on the reading zone portion of the barcode target along an optical emission path (16a,16b,17a,17b,18a,18b of figures 3 and 7), wherein the at least one illuminating assembly having a light source (1 or S of figure 7), a diaphragm (figures 3 and 7) is considered as a transparent window (14 of figures 7 and 8a-8d) and an aperture (15 of figure 7 or 120 of figure 8a) including a preset shape (figure 8) for selecting a portion of the light generated by the light source (1 of figure 7), and a converging lens (2 of figure 7) placed downstream of the diaphragm (14,15) for collimating the shaped light coming from the diaphragm and projecting the light onto the reading zone portion of barcode target. See figures 1-24a and 24b.

Plesko does not teach clearly that two first illuminating assemblies and two second illuminating assemblies disposed symmetrically relative to the aiming axis Z such that optical paths of the assemblies from a quadrangular portion on the reading zone, wherein the optical paths of the first two illuminating assemblies and the second two illuminating assemblies are set, relative to the axis Z, at an angle of $+\phi v/2$ and $-\phi v/2$, respectively, on the first reference plane XZ and at an angle $+\phi h/2$ and $-\phi h/2$, respectively, on the second refence plane YZ; and wherein the illuminating assemblies comprises a single optical deflection prism arranged on each optical emission path downstream of the converging lens. However, such the features are known in the art, for example, as taught by Massieu et al. From the same field of endeavor, Massieu et al discloses:

* two first illuminating assemblies and two second illuminating assemblies disposed symmetrically relative to the aiming axis Z or Y (figure 2) such that optical paths of the assemblies from a quadrangular portion on the reading zone (12 of figure 2) , wherein the optical paths of the first two illuminating assemblies and the second two illuminating assemblies are set, relative to the axis Z or Y (figure 2), at an angle of $+\phi v/2$ and $-\phi v/2$, respectively, on the first reference plane XZ and at an angle $+\phi h/2$ and $-\phi h/2$, respectively, on the second refence plane YZ and wherein the illuminating assemblies comprises a single optical deflection prism arranged on each optical emission path downstream of the converging lens (col.4 lines 63 to col.5 line 60). See figures 1-3.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include in Plesko's the optical device as taught by Massieu et al for the purpose of reading different bar codes having different widths of bar codes and low cost system.

Regarding claim 29; Plesko discloses a method for aiming and visually indicating a reading zone of barcode, the method comprising steps of:

* generating at least one light beam from a light source (S of figure 3) for illuminating a portion of the reading zone along an emission path (figures 3 and 7);

* selecting a portion of the light beam generated from a shape diaphragm (14,15 of figure 3) by the light source (S);

* collimating the portion of the shape light beam coming by a converging lens (2 of figure 3)from the diaphragm (14,15);

* projecting the light beam picked up on the converging lens (2) onto the reading zone of barcode (figure 7). See figures 1-24a and 24b.

Plesko does not teach clearly that picking up the light beam by a receiving lens from the illuminated portion of the reading zone of the barcode, acquiring the image of the light beam by a sensing means from the reading zone and the receiving lens, and processing the acquired image of the light beam to calculating the distance and orientation of the reading zone. However, the features are known in the art, for example, as taught by Massieu et al. Massieu et al, from the same field of endeavor, discloses:

* picking up the light beam by a receiving lens (13 of figure 2) from the illuminated portion of the reading zone of the barcode (12 of figure 2),

* acquiring the image of the light beam by a sensing means (14 of figure 2)) from the reading zone (12) and the receiving lens (13), and

* processing the acquired image of the light beam to calculating the distance and orientation of the reading zone (col.6 lines 25-65). See figures 1-3.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include in Plesko's the optical device as taught by Massieu et al for the purpose of measuring or calculating the distance and orientation with different from the bar codes and low cost system.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Khvostov (WO/97/31340) discloses optical reflection sensing arrangement for scanning device; Bianco et al (4,816,659) discloses bar code reader head; De Man (5,304,813) discloses apparatus for the optical recognition of documents; and Niwa (5,280,161) discloses apparatus for optically reading a bar code.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Sang Nguyen whose telephone number (703)308-6426. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Frank Font, can be reached on (703)308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

SN

Nguyen/ sn

September 18, 2001

**Frank G. Font**
**Supervisory Patent Examiner**
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